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US EPA RECORDS CENTER REGION 5



473226

October 16, 1984

Mr. Larry Boettcher  
John Sexton Contractors Co.  
1815 So. Wolf Road  
Hillside, IL 60162

Re: Abandoned Site Survey

Dear Larry,

Pursuant to your request, we have critiqued the Ecology and Environment investigation documentation as provided to Sexton. Our comments, questions, and suggestions are provided herein for your review.

1. The inorganic analysis document provides lists of metals, inorganic species, and detection limits of each specie. According to this document, various parameters can be analysed by more than one procedure. The specific analytical procedure for each compound has not been identified and should be provided to permit a better understanding of the problem and achieve consistency in comparisons, etc.
2. Several of the QA forms provided to us and required for test results, spikes duplicates, etc., are not legible.
3. Analytical reporting forms require 12 analytical determinations be made per sample. This is considered to be non-standard laboratory practice for routine analyses. The exact level of analysis should be confirmed prior to sampling.
4. The methods for organic analysis consist of various revised or corrected pages of a document which has not been provided. The discontinuity of this information does not enable a review. Chemical procedures, sampling, and preservation should be provided in an understandable sequence of performance, etc.

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5. Preservation of samples as indicated in Attachment B and C of Mr. Cozza's letter to Mr. Gallo is not consistent with the sampling and preservation protocols provided in the laboratory document, i.e.:
  - °  $\text{CN}^-$  should be preserved with NaOH to pH 12, 0.008%  $\text{Na}_2\text{S}_2\text{O}_3$  according to one document, and  $\text{HNO}_3$  to pH 2 according to the other.
  - ° Hg should include 0.05%  $\text{K}_2\text{Cr}_2\text{O}_7$  as a preservative. One document indicates that no preservative is required.
  - ° Organics should be preserved using  $\text{H}_2\text{SO}_4$  to pH 2 and/or 0.008%  $\text{Na}_2\text{S}_2\text{O}_3$  depending on fraction considered. One document is mute on this point.
6. The groundwater sampling protocol states that organics are to be filtered using a 0.45 u filter. We believe this to be a typographical error which should be clarified (organics should not be filtered).
7. In the event that 3 - 5 volumes of water cannot be removed from the well prior to sampling, what is the required course of action? No alternative is specified in the E & E protocol.
8. The sampling point within each well has not been specified. Does E & E intend to take a top sample, bottom sample, or sample from the midpoint of the water column?

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9. Are any field Quality Control samples required (i.e., blanks, splits, spikes, surrogates, etc.)? At what frequency? How? When? and Why?
10. Will E & E be supplying bottles or conducting their own filtering, labeling, chain of custody, packing, and transport to the laboratory?
11. Many of the organic compounds are reported as insoluble in water. What is the justification for analysis of such compounds?

The data and information generated on the 2070 forms "Potential Hazardous Waste Site Preliminary Assessment" placed the four Sexton sites on an inspection list based on hazards attributed to unknown "other inorganics", "other organics", or wastes known to be "non-hazardous". E & E has failed to provide any information on data reduction, ranking of sites, pass/fail or comparison standards as requested. At this time, we do not know what is considered acceptable or unacceptable. Since a single sampling rarely is capable of identifying the presence or lack of contamination, the method of evaluation is critical to determine final site status and should be requested.

Based upon our review of sampling protocol, we do not think that coupling with the November quarterly monitoring is the most effective approach because:

- ° The two programs apparently will require analysis of different parameters.
- ° Additional time would be required for the E & E program which would greatly extend the effort required for our quarterly program.

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- ° Several monitoring wells do not yield sufficient volumes of water for both quarterly sampling and the E & E program. Because of your permit conditions, we believe that quarterly sampling must take priority.

Please contact our office should you have any questions regarding our review.

Very truly yours,

ELDREDGE ENGINEERING ASSOCIATES, INC.



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